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CODEN: KOZADW ÌSSN: 0287-9840 LANGUAGE: Japanese PUBLISHER: Kinzoku

Kozankai, Nippon Kogyo Kyokai

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                (Item 2 from file: 399)
DIALÓG(R) File 399: CA SEARCH(R)
(c) 2009 American Chemical Society. All rts. reserv.
                   CA: 147(25) 525580y
  147525580
                                               J OURNAL
  History of copper smelting technology
  AUTHOR(S): Sako, Yuki o
  LCCATION: Information Center of Industrial Technological History,
National Science Museum, Tokyo, Japan,
JOURNAL: Kozan (Kozan) DATE: 2006 VOLUME: 59 NUMBER: 11 PAGES: 39-52
  CODEN: KOZADW ÌSSN: 0287-9840 LANGUAGE: Japanese PUBLISHER: Kinzoku
Kozankai, Nippon Kogyo Kyokai
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                (Item 3 from file: 399)
DIALOG(R) File 399: CA SEARCH(R)
(c) 2009 American Chemical Society. All rts. reserv.
                  CA: 142(23)438413z
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                                               PATENT
  X-ray detector and its use in fluorescent x-ray analyzer
  INVENTOR(AUTHOR): Sako, Yukio; Shoji, Takashi; Arage, Akira
  LOCATION: Japan,
ASSIGNEE: Rigaku Industrial Corp.
  PATENT: Japaň Kokai Tokkyo Koho ; JP 2005121400 A2 DATE: 20050512
  APPLICATION: JP 2003354581 (20031015)
PAGES: 7 pp. CODEN: JKXXAF LANGUAGE: Japanese
  PATENT CLASSIFICATIONS:
     CLASS: Q01T-007/00A; Q01N-023/223B; Q01T-001/20B
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DIALOG(R) File 399: CA SEARCH(R)
(c) 2009 American Chemical Society. All rts. reserv.
  141342550
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  Fluorescent x-ray analyzer
  INVENTOR(AUTHOR): Ayukawa, Yasuhiro; Ono, Megumi; Sako, Yukio
  LCCATION: Japan,
ASSIGNEE: Rigaku Industrial Corporation
PATENT: PCT International; WD 200488296 A1 DATE: 20041014
APPLICATION: WD 2004JP3229 (20040311) *JP 200391965 (20030328)
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  PAGES: 14 pp.
  PATENT CLASSIFICATIONS:
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PT; RO; RU; SC; SD; SE; SG; SK; SL; SY; TJ; TM; TN; TR; TT; TZ; UA; UG; US; UZ; VC; VN; YU; ZA; ZM; ZW DESIGNATED REGIONAL: BW, GH; GM; KE; LS; MW, MZ; SD; SL; SZ; TZ; UG; ZM; ZW, AM, AZ; BY; KG; KZ; MD; RU; TJ; TM; AT; BE; BG; CH; CY; CZ; DE; DK; EE; ES; FI; FR; GB; GR; HU; IE; IT; LU; MC; NL; PL;
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DIALOG(R) File 399: CA SEARCH(R)
(c) 2009 American Chemical Society. All rts. reserv.
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  Apparatus for fluorescent x-ray analysis under helium
                                                  Page 3
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10553948deoxyguanosi ne. t xt
  INVENTOR(AUTHOR): Nishimoto, Yukio; Misonou, Takashi; Kimoto, Katsumi;
Sako, Yuki ò
  LOCATION: Japan,
  ASSIGNEE: Rigaku Industrial Corporation
PATENT: Japan Kokai Tokkyo Koho ; JP 2003254919 A2 DATE: 20030910
  APPLICATION: JP 200256800 (20020304)
PAGES: 8 pp. CODEN: JKXXAF LANGUAGE: Japanese
  PATENT CLASSIFICATIONS:
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DIALOG(R) File 399: CA SEARCH(R)
(c) 2009 American Chemical Society. All rts. reserv.
  139142918
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  Wavelength dispersive fluorescence X ray spectrometer
  INVENTOR(AUTHOR): Kimoto, Katsumi; Sako, Yukio
  LOCATION: Japan,
  ASSIGNEE: Rigaku Industrial Corporation
  PATENT: Japan Kokai Tokkyo Koho ; JP 2003215073 A2 DATE: 20030730
  APPLICATION: JP 200218298 (20020128)
PAGES: 5 pp. CODEN: JKXXAF LANGUAGE: Japanese
  PAŒS: 5 pp. CODEN: JAPATENT CLASSIFICATIONS:
     CLASS: G01N-023/223A
                (Item 7 from file: 399)
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DIALOG(R) File 399: CA SEARCH(R)
(c) 2009 American Chemical Society. All rts. reserv.
                  CA: 135(20)295213b
                                              PATENT
  X-ray detector
  INVENTOR(AUTHOR): Fujimori, Junji; Sako, Yukio
  LOCATION: Japan,
  ASSIGNEE: Rigaku Denki Kogyo K. K.
  PATENT: Japan Kokai Tokkyo Koho; JP 2001281342 A2 DATE: 20011010
  APPLICATION: JP 200089348 (20000328)
  PAŒS: 4 pp. CODEN: JK
PATENT CLASSI FI CATI ONS:
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DI ALOG(R) File 399: CA SEARCH(R)
(c) 2009 American Chemical Society. All rts. reserv.
  134269101
                  CA: 134(19) 269101y
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  Copper-containing waste processing and recycling in Mtsui Mning &
  Smelting Co. Electrodeposited copper foil production from
  copper-containing recycling materials
AUTHOR(S): Sako, Yukio; Yukimasa, Toshiaki
LOCATION: MESCO, Inc. Engineering Division of Mitsui Mining and Smelting
Co., Ltd., Tokyo, Japan,
JOURNAL: GME '99, Global Met. Environ., Proc. Global Conf. Environ.
Control M.n. Metall. EDITOR: Qiu, Dingfan (Ed), Chu, Youyi (Ed), DA
1999 PAGES: 406-412 CODEN: 69AXOL LANGUAGE: English PUBLISHER:
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International Academic Publishers, Beijing, Peop. Rep. China
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                 (Item 9 from file: 399)
DIALOG(R) File 399: CA SEARCH(R)
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132169021
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  Effective production increase method electrolytic copper
AUTHOR(S): Yuki masa, Toshi aki; Kitahara, Takayoshi; Sako, Yuki o
LOCATION: Mitsui Kinzoku Engineering Co., Ltd., Japan,
JOURNAL: Kozan DATE: 1999 VOLUME: 52 NUMBER: 9 PAGES: 21-25 CODEN:
KOZADW ISSN: 0287-9840 LANGUAGE: Japanese PUBLISHER: Kinzoku Kozankai,
Nippon Kogyo Kyokai
5/3, K/11 (Item 10 from file: 399)
DIALOG(R) File 399: CA SEARCH(R)
(c) 2009 American Chemical Society. All rts. reserv.
                  CA: 129(26)350333u
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  Method and device for setting incident radiation angular in total
  reflection X-ray fluorescence analysis
  INVENTOR(AUTHOR): Sako, Yukio
  LCCATION: Japan,
  ASSIGNEE: Rigaku Denki Kogyo K. K.
  PATENT: Japan Kokai Tokkyo Koho; JP 98282021 A2; JP 10282021 DATE:
19981023
  APPLICATION: JP 9783940 (19970402)
  PAŒS: 11 pp. CODEN: JKXXAF LANGUAŒ: Japanese
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5/3, K/12 (Item 11 from file: 399)
DIALOG(R) File 399: CA SEARCH(R)
(c) 2009 American Chemical Society. All rts. reserv.
                  CA: 128(22)278342f
  128278342
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  Development of portable X-ray fluorescence spectrometer
  AUTHOR(S): Hirai, Makoto; Utáka, Tadashi; Sako, Yukio; Nisawa, Atsushi;
Nomura, Shi geaki; Tani guchi, Kazuo
  LOCATION: RIGAKU Industrial Corporation, Takasuki, Japan, 569-1146
JOURNAL: X-sen Bunseki no Shinpo DATE: 1998 VOLUME: 29, PAGES:
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  CODEN: XBNSDA ISSN: 0911-7806 LANGUAGE: Japanese PUBLISHER: Agune
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                 (Item 12 from file: 399)
DIALOG(R) File 399: CA SEARCH(R)
(c) 2009 American Chemical Society. All rts. reserv.
  126123830
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                                            PATENT
  X-ray detector for detecting the characteristic x-rays of a material
  INVENTOR(AUTHOR): Uko, Tadašhi; Shoji, Takashi; Sako, Yukio
  LOCATION: Japan,
ASSIGNEE: Rigaku Denki Kogyo Kk
  PATENT: Japan Kokai Tokkyo Koho; JP 96313642 A2; JP 08313642 DATE:
  APPLICATION: JP 95142674 (19950516)
  PAGES: 4 pp. CODEN: JR
PATENT CLASSI FI CATI ONS:
                   CODEN: JKXXÀF LANGUÁGE: Japanese
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10553948deoxyguanosi ne. t xt
                    CA: 120(8)81421j
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  The contribution of electrolytic manganese dioxide and zinc powder to
  recent improvement in dry battery performance
  AUTHOR(S): Sako, Yukio; Sasaki, Masamoto; Kobayashi, Satoru; Senzaki,
Hi rohi sa
  LOCATION: Battery Mater. Div., Mitsui Min. and Smelting Co., Ltd., J
JOURNAL: Metall. Rev. MM J DATE: 1992 VOLUME: 9 NUMBER: 2 PAGES:
152-61 CODEN: MRMMED ISSN: 0289-6214 LANGUAGE: English
5/3, K/15 (Item 14 from file: 399)
DIALOG(R) File 399: CA SEARCH(R)
(c) 2009 American Chemical Society. All rts. reserv.
                    CA: 119(18) 194602s
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  Ultratrace analysis by total reflection x-ray fluorescence method
  AUTHOR(S): Utaka, Tadashi; Sako, Yukio; Kojima, Sinjirou; Iwamoto,
Kanemasa; Kouno, Hiroshi; Atsumi, Jun
LOCATION: Rigaku Ind. Corp., Takatsuki, Japan, 569
JOURNAL: X-sen Bunseki no Shinpo DATE: 1992 VOLUME: 23, PAGES: 225-38
  CODEN: XBNSDA ISSN: 0911-7806 LANGUAGE: Japanese MEETÍNG DATE: 910000
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  116206942
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  Instrumentation and applications of total reflection fluorescence
  spect roscopy
  AUTHOR(S): Íwamoto, Kanemasa; Kojima, Shinjirou; Sako, Yukio; Utaka,
Tadashi; Arai, Tomoya
LOCATION: RIGAKU Ind. Corp., Takatsuki, Japan,
JOURNAL: Anal. Sci. DATE: 1991 VOLUME: 7 NUMBER: Suppl., Proc.
Congr. Anal. Sci., 1991, Pt. 1 PAGES: 499-502 CODEN: ANSCEN ISSN:
                                                                                    Proc. Int.
0910-6340 LANGUAGE: English
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  Instrumentation and applications of total reflection x-ray fluorescent
  spectrometry
AUTHOR(S): Sako, Yukio; Iwamoto, Kanemasa; Kojima, Shinjiro
Takatsuki, Japan, 569
  LOCATION: Rigaku Ind. Corp., Takatsuki, Japan, 569
JOURNAL: X-sen Bunseki no Shinpo DATE: 1989 VOLUME: 21, PAGES: 123-34
CODEN: XBNSDA ISSN: 0911-7806 LANGUAGE: Japanese
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                   (Item 17 from file: 399)
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(c) 2009 American Chemical Society. All rts. reserv.
                   CA: 94(8)54705t
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  94054705
  Current status of zinc electrolytic industries and energy saving AUTHOR(S): Sako, Yukio LOCATION: Mitsui Kinzoku Kozan K. K., Japan,
  JOURNAL: Denki Kagaku Kogyo no Shoenerugii to Enerugii Kanri DATE: 1980
PAŒS: 9/1-13 CODEN: 44KFAB LANGUAŒ: Japanese PUBLISHER: Denki Kagaku
Kyokai, Tokyo, Japan
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(c) 2009 American Chemical Society. All rts. reserv.
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  Current status of copper electrolytic industries and energy saving
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  AUTHOR(S): Sako, Yukio
LOCATION: Mitsui Kinzoku Kogyo K. K., Japan,
  JOURNAL: Denki Kagaku Kogyo no Shoenérugii to Enerugii Kanri
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  PAGES: 8/1-16 CODEN: 44KFAB LANGUAGE: Japanese PUBLISHER: Denki Kagaku
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5/3, K/20 (Item 1 from file: 8) DIALCG(R) File 8: Ei Compendex(R)
(c) 2009 Elsevier Eng. Info. Inc. All rts. reserv.
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  Examination of the effective method on increasing production capacity of
copper electrorefining
  Sako, Yukio; Nishimura, Yuji; Kitahara, Kokichi; Yukimasa, Toshiaki
Corresp. Author/Affil: Sako, Yukio: MESCO, Inc
Metallurgical Review of MMJ (Mining and Metallurgical Institute of
Japan) ( Metall Rev MMJ) 1998, 15/2 (175-183)
  Publication Date: 19981201
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AU=KOBAYASHI, HI DEHI RO
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              AU=KOBAYASHI, HIDEYA
E32
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Page 10

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                              HI ROKI
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PLEASE ENTER A COMMAND OR BE LOGGED OFF IN 5 MINUTES
? s e2 and guanosine
              262
                    AU=KOBAYASHI, HIROKO
           250673
                    GUANOSI NE
       S8
                    AU=' KOBAYASHI, HIROKO AND GUANOSINE
                O
? s e2 and deoxyguanosine
              262
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                    DEOXYGUANOSI NE
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       S9
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          2864177
                    NUCLEOTI DE
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? s s10 and (DNA or deoxribonucleotide)
Processing
Processed 7
            20 of
                    56 files
Completed processing all files
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          9225258
                    DNA
                    DEOXRI BONUCLEOTI DE
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                    S10 AND (DNA OR DEOXRI BONUCLEOTI DE)
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                    56 files .
>>>File 399 processing for METHYL? stopped at METHYLCHLOROISO
>>>File 391 processing for METHYL? stopped at METHYL-2-(2-(3-CHLORPHENYL)-H
  YDRAZONO) - 2- I SOPR
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                    56 files ...
Completed processing all files
             4725
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                    GUANOSI NE
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                    S11 AND METHYL? AND GUANOSINE
     S12
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10553948deoxyguanosi ne. t xt
>>>Duplicate detection is not supported for File 391.
>>>Records from unsupported files will be retained in the RD set.
               204 RD (unique items)
      S13
? t s13/3, k/1-1-15
>>>Successive range operators in itemlist
? t s13/3, k/1-15
>>>KW/C option is not available in file(s): 399
                (Item 1 from file: 5)
 13/3, K/1
DIALOG(R) File
                  5: Biosis Previews(R)
(c) 2009 The Thomson Corporation. All rts. reserv.
17560993
             BI OSI S NO.: 200300516356
3H-labelled alkyl-nucleotides, -nucleosides and -bases for the
  immunoanalytical quantification of DNA damage and repair.
AUTHOR: Drosdziok Wolfgang; Lutze Catrin; Krueger Kai; Gluesenkamp
Karl-Heinz; Rajewsky Manfred F (Reprint)
AUTHOR ADDRESS: Medical School, Institute of Cell Biology (Cancer
  Research), University of Essen, Hufelandstrasse 55, D-45122, Essen, Germany**Germany
AUTHOR E-MAIL ADDRESS: rajewsky@uni-essen.de
JOURNAL: Journal of Labelled Compounds and Radiophar maceuticals 46 (9): p 815-835 August 2003 2003
MEDIUM: print
ISSN: 0362-4803 _(ISSN print)
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English
3H-labelled alkyl-nucleotides, -nucleosides and -bases for the
  immunoanalytical quantification of DNA damage and repair.
ABSTRACT: Analysis of the formation and repair of structurally modified
  DNA is of particular interest in the study of carcinogenesis,
  cancer therapy and aging. The quantification of specific DNA
  lesions by sensitive immunoanalytical methods requires radiotracers with
  high specific activity. We describe the synthesis...
...alkyl-(8-3H) adenine (Alkyl=Me, Et, n-Bu); C6-alkyl-deoxy(1',2'-3H) guanosine (Alkyl=Me, Et, i-Pro, n-Bu); C6-ethyl-deoxyguanosine-5'-triphosphate ((2-3H-Ethyl); (8-3H)); C6-alkyl-9-hydroxyhexyl-(8-3H) guanine (Alkyl=Me, Et); 7-ethyl-(8,5'-3H)
  guanosi ne-3',5'-cyclic-phosphate; O2-and O4-alkyl-(methyl, 1',2'-3H)thym dine (Alkyl=Me, Et); the conversion of 3H-labelled
  thym dine to the corresponding 5-methyl cytidine; the synthesis of
  three different 8-oxoguanine tracers; and the generation of thymidine
  glycol (5, 6-dihydroxy-5, 6-dihydro-(methyl-3H) thym dine) from
  thým dine. All radiotracers were sucessfully employed in competitive radioi munoassays for the quantification of defined DNA alkylation
  products in DNA repair analyses.
DESCRI PTORS:
  CHEMICALS & BIOCHEMICALS:
                                   ...tritiated 7- et hyl-guanosi ne
    -3', 5'-cyclic-phosphate...
...tritiated O-6-alkyl-deoxy-guanosine--...
...tritiated} O-6-ethyl-deoxyguanosine-5'-triphosphate{
  METHODS & EQUIPMENT: tritiated} labelled alkyl-nucleotide synthesis
  M SCELLANEOUS TERMS:
                             DNA damage/repair...
CONCEPT CODES:
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าฮ/ฮ, K/2 (Item 2 from file: 5)
DIALOG(R) File 5: Biosis Provision (ก) 2002
                `5:Biosis Previews(R)
(c) 2009 The Thomson Corporation. All rts. reserv.
            BIOSIS NO.: 199090136739
10352260
PROTON AND CARBON-13 NMR CONFORMATIONAL ANALYSIS AND MINIMAL POTENTIAL
  ENERGY CALCULATIONS WITH DEOXYGUANOSINE GUANOSINE AND GMP
  ADDUCTS OF THE BORDERLINE CARCINOGEN 4 METHYLANILINE
AUTHOR: MEI ER C (Reprint); BOCHE G
AUTHOR ADDRESS: FACHBEREI CH CHEM, UNI V MARBURG, HANS-MEERWEI N-STRASSE,
  D-3550 MARBURG**GERMANY
JOURNAL: Chemische Berichte 123 (8): p1707-1714 1990
I SSN: 0009-2940
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: GERMAN
PROTON AND CARBON-13 NMR CONFORMATIONAL ANALYSIS AND MINIMAL POTENTIAL
  ENERGY CALCULATIONS WITH DEOXYGUANOSINE GUANOSINE AND GMP
  ADDUCTS OF THE BORDERLINE CARCINOGEN 4 METHYLANILINE
ABSTRACT: The conformations of the C-8-nucleobase adducts of the borderline
  carcinogen 4-met hylaniline (p-t oluidine) N-(deoxyguanosine -8-yl)-4-met hylaniline (10), N-(guanosine-8-yl)-4-met hylaniline (11), and 8-(4-met hylanilino
  )-5'-guanosi nemonophosphate (12) have been investigated by 1H-, 13C-NMR
  spectroscopy and "minimal-potential-energy...
...the nucleoside adducts 10, 11 exist preferentially in the anti
  conformation while the 5'-phosphorylated nucleotide adduct 12
  exists in the syn conformation. Different conformations are also
  observed around the backbone...
... nucl eosi de adducts 10, 11 show a strong preference for the gauche-gauche
  conformation (ca. 90%), nucleotide adduct 12 exists mainly in the
  gauche-trans/trans-gauche conformation (ca. 70%). All adducts...
...the conformational data of monocyclic arylamine adducts, 10, 11, and 12 with the conformations of DNA- or oligonucleotide-bonded 2-[(
  deoxyguanosi ne-8-yl) am no] fluor ene (6) shows, that the
  conformational situations in the case of the...
...like 2-aminofluorene thus seems not to be connected with the
  conformational changes of the DNA double helix caused by adduct
  formation but rather with the in vivo metabolization to give...
... REGISTRY NUMBERS: DEOXYGUANOSINE; ...
. . . GUANOSI NE; . . .
  . 4- METHYLANI LI NE;
DESCRIPTORS: 2 AM NOFLUORENE HEPATOCARCINOGEN DNA
DESCRI PTORS:
  CHEMI CALS & BI OCHEMI CALS: ... DEOXYGUANOSI NE; ...
... GUANOSI NE; ...
. . . 4- METHYLANI LI NE;
               (Item 3 from file: 5)
DIALOG(R) File 5: Biosis Previews (R)
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07308021 BIOSIS NO.: 198478043428
THE ROLE OF DEOXY NUCLEOSIDE TRI PHOSPHATE POOLS IN THE INHIBITION OF DNA EXCISION REPAIR AND REPLICATION IN HUMAN CELLS BY HYDROXY UREA AUTHOR: SNYDER R D (Reprint)

AUTHOR ADDRESS: STAÙFFER CHÉM CO, 400 FARM NGTON AVE, FARM NGTON, CT 06032, USA* * USA

JOURNAL: Mutation Research 131 (3-4): p163-172 1984

I SSN: 0027-5107

DOCUMENT TYPE: Article RECORD TYPE: Abstract

LANGUAGE: ENGLISH

THE ROLE OF DEOXY NUCLEOSIDE TRI PHOSPHATE POOLS IN THE INHIBITION OF DNA EXCISION REPAIR AND REPLICATION IN HUMAN CELLS BY HYDROXY UREA

ABSTRACT: Effects of hydroxyurea (HU) on the DNA-excision repair process in human cells was systematically examined. It is demonstrated that HU induces DNA single-strand break accumulation in a dose-dependent fashion in UV-irradiated and MMS[methyl met hanesul fonate] - treated confluent but not log-phase fibroblasts and that these breaks are clearly the...

for at least 10 h and largely disappear by 20 h. The production of these DNA-strand breaks is antagonized by a combined treatment of 10 . mu. M deoxyadenosi ne, deoxycyt i di ne and deoxyguanosi ne; t hymi di ne potentiates strand-break formation at low HU concentrations. It is also confirmed that HU, while inhibiting replicative synthesis has no apparent inhibitory effect on unscheduled DNA synthesis (UDS) although the increased uptake of labeled DNA precursors into HU-treated cells makes it difficult to assess the actual effects on the...

... REGI STRY NUMBERS: METHYL METHANESULFONATE...

. DEOXYGUANOSI NE;

DESCRIPTORS: METHYL METHANESULFONATE UV MUTAGEN DEOXY ADENOSINE DEOXY CYTI DI NE DEOXY GUANOSI NE METABOLI C-DRUG ANTI DOTE RI BO NUCLEOTI DE REDUCTASE/ DESCRI PTORS:

CHEM CALS & BI OCHEM CALS: ... METHYL METHANESULFONATE...

... DEOXYGUANOSI NE;

(Item 4 from file: 5) 13/3, K/4 `5:Biosis Previews(R) DIALOG(R) File

(c) 2009 The Thomson Corporation. All rts. reserv.

05965508 BIOSIS NO.: 198069079495 SYNTHESIS OF CARBON-14 LABELED METHYLDEOXY GUANOSINE AND ITS DEOXY NUCLEOTIDE CO POLYMERS

AUTHOR: ABBOTT P J (Reprint); MEHTA J R; LUDLUM D B AUTHOR ADDRESS: DEP PHARMACOL EXP THER, ALBANY MED COLL UNION UNIV, ALBANY, NY 12208, USA**USA

JOURNAL: Biochemistry 19 (4): p643-647 1980

I SSN: 0006-2960

DOCUMENT TYPE: Article RECORD TYPE: Abstract

LANGUAGE: ENGLISH

SYNTHESIS OF CARBON-14 LABELED METHYLDEOXY GUANOSINE AND ITS DEOXY NUCLEOTI DE CO POLYMERS

ABSTRACT: To study the nature and repair of the promutagenic DNA lesion C6-methylguanine, 8-14C-labeled C6methyl deoxyguanosine triphosphate [mGTP] was synthesized and the kinetics of its incorporation into the synthetic copolymers poly(dC [deoxycytidine], m6dG [deoxyguanosine]) and poly(dT [deoxyribosylthymidine], m6dG) was investigated. Deoxy[8-14C] guanosine was methylated with ethereal diazomethane and the products were separated by high-pressure liquid chromatography. C6-Methyldeoxy[14C] guanosine was converted to the 5'-monophosphate with carrot phosphotransferase and then to the 5' - tri phosphat e. . .

- ...the action of N, N'-carbonyldiim dazole. Although m6dGTP was a poor substrate for Escherichia coli DNA polymerase I, copolymers could be synthesized from dCTP or dTTP and m6dGTP with terminal deoxynucl eot i dyl . . .
- ...poly(dC, m6dG). Good yields of both polymers were readily obtained. The stability of C6-methyldeoxyguanosine in poly(dT, m6dG) was pH dependent and the half-life was measured at 4 pH values. [The relationship between DNA lesions and carcinogenesis is discussed.].

DESCRIPTORS: ESCHERICHIA-COLI DNA POLYMERASE I CARROT PHOSPHO TRANSFERASE DEOXY NUCLEOTI DYL TRANSFERASE MUTAGENESI S CARCI NOGENESI S

(Item 1 from file: 24) 13/3, K/5 DIALOG(R) File 24: CSA Life Sciences Abstracts (c) 2009 CSA. All rts. reserv.

0003193824 IP ACCESSION NO: 8021080 DNA-Protein Cross-links between Quanine and Lysine Depend on the Mechanism of Oxidation for Formation of C5 Vs C8 Quanosine Adducts

Xu, Xiaoyun; Muller, James G; Ye, Yu; Burrows, Cynthia J Department of Chemistry, University of Utah, 315 S. 1400 East, Salt Lake City, Utah 84112-0850, [mailto:burrows@chem.utah.edu]

Journal of the American Chemical Society, v 130, n 2, p 703-709, 2008 PUBLICATION DATE: 2008

PUBLISHER: American Chemical Society, P.O. Box 182426 Columbus OH 43218-2426 USA, [mailto:service@acs.org], [URL:http://pubs.acs.org]

DOCUMENT TYPE: Journal Article

RECORD TYPE: Abstract LANGUAGE: English

SUMMARY LANGŬAGE: English

I SSN: 1272-7863 ELECTRONI C I SSN: 1520-5126

FILE SEGVENT: Nucleic Acids Abstracts

DNA-Protein Cross-links between Quanine and Lysine Depend on the Mechanism of Oxidation for Formation of C5 Vs C8 Quanosine Adducts

ABSTRACT:

The reaction between N super(alpha)-acetyllysine methyl ester (Lys) and 2'-deoxyguanosine (dGuo) was used to study structural aspects of DNA-protein cross-link (DPC) formation. The precise structure of DPCs depended on the nature of ...

...Sp). Singlet oxygen oxidation of dGuo produced 5-Lys-Sp exclusively when Rose Bengal or methylene blue was used to photochemically generate super(1) O sub(2) in the presence of ...

Page 15

... of dQuo modifications from riboflavin photooxidation increased dramatically in the presence of lysine. Oxidation of deoxyguanosine /lysine mixtures with Na sub(2) IrO sub(6) or sulfate radicals produced both 5...

...double-stranded oligodeoxynucleotides, and these could be analyzed after nuclease digestion. Adduct formation in duplex DNA was somewhat dependent on the accessibility of lysine to C5 vs C8 of the purine...

DESCRIPTORS: Adducts; DNA; Deoxyguanosine; Guanine; Guanosine; Lysine; Methylene blue; Nuclease; Cligonucleotides; Oxidants; Oxidation; Oxygen; Photochemistry; Photooxidation; Radicals; Riboflavin; Sulfate; purines ... SUBJ CATG: Antisense, Nucleotide Analogs

13/3, K/6 (Item 2 from file: 24)
DIALOG(R) File 24: CSA Life Sciences Abstracts
(c) 2009 CSA. All rts. reserv.

0003167481 IP ACCESSION NO: 8010995 Anopheles gambiae Purine Nucleoside Phosphorylase: Catalysis, Structure, and Inhibition

Taylor, EA; Rinaldo-Matthis, A; Li, L; Ghanem, M; Hazleton, KZ; Cassera, MB; Almo, SC; Schramm, VL Department of Biochemistry, Albert Einstein College of Medicine at Yeshiva University, 1300 Mbrris Park Avenue, Bronx, New York 10461, USA

Bi ochem stry (Washington), v 46, n 43, p 12405-12415, Cct ober 30, 2007 PUBLI CATI CN DATE: 2007

DOCUMENT TYPE: Journal Article
RECORD TYPE: Abstract
LANGUAGE: English
SUMMARY LANGUAGE: English
ISSN: 0006-2960
FILE SEGMENT: Nucleic Acids Abstracts

ABSTRACT:

... for 2'-deoxyinosine and inosine, its preferred substrates, and 1.0 s super(-1) for guanosine. However, the chemical step is fast for AgPNP at 226 s super(-1) for guanosine in pre-steady-state studies.
5'-Deaza-1'-aza-2'-deoxy-1'-(9-methylene)-Immucillin-H (DADMe-ImmH) is a transition-state mimic for a 2'-deoxyinosine ribocation with...

...transition state predictions of enhanced transition-state analogue binding in enzymes with enhanced catalytic efficiency. Deoxyguanosine is a weaker substrate than deoxyinosine, and DADMe-Immucillin-Gisless tightly bound than...

DESCRIPTORS: Anions; Auxotrophs; Catalysis; Cations; Crystal structure; Deoxyguanosine; Enzymes; Genomes; Guanosine; Homology; Malaria; Nucleotide sequence; Parasites; Phosphate; Purine-nucleoside phosphorylase; purines; Anopheles gambiae; Escherichia coli; Plasmodium falciparum ... SUBJ CATG: DNA Metabolism & Structure

13/3, K/7 (Item 3 from file: 24)
DIALOG(R) File 24: CSA Life Sciences Abstracts
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IP ACCESSION NO: 2503074 0001028450 Combined high-performance liquid chromatography/ super (32) P-postlabeling assay of N super (7) - met hyl deoxyguanosi ne.

Shields, PG; Povey, AC; Wilson, VL; Weston, A; Harris, CC Lab. Hum Carcinog., Div. Cancer Etiol., Natl. Cancer Inst., Build. 37, Rm 2005, 9000 Rockville Pike, Bethesda, MD 20892, USA

Cancer Research, v 50, n 20, p 6580-6584, ADDL. SOURCE INFO: Cancer Research [CANCER RES.], vol. 50, no. 20, pp. 6580-6584, 1990 PUBLICATION DATE: 1990

DOCUMENT TYPE: Journal Article

RECORD TYPE: Abstract LANGUAGE: English

SUMMARY LANGÜAGE: English

I SSN: 0008-5472

FILE SEGVENT: Nucleic Acids Abstracts

Combined high-performance liquid chromatography/ super(32)P-postlabeling assay of N super (7) - met hyl deoxyguanosi ne.

ABSTRACT:

A highly sensitive and specific assay for the detection of N super(7)met hyl-2'-deoxyguanosi ne has been developed by combi ni ng high-performance liquid chromatography, super(32)P-postlabeling, and nucleotide chromatography.

IDENTIFIERS: N super (7) - met hyl deoxyguanosine; det ection; improvements; met hodol ogy; derivatives; high-performance liquid chromatography; guanosine

13/3, K/8 (Item 1 from file: 34) DIALOG(R) File `34: Sci Search(R) Cited Ref Sci (c) 2009 The Thomson Corp. All rts. reserv.

12358629 Genuine Article#: 758PH No. References: 43 Title: A new, but old, nucleoside analog: the first synthesis of 1-deaza-2 -deoxyguanosine and its properties as a nucleoside and as ol i godeoxynucl eot i des

Author: Kojima N (REPRINT) ; Inoue K; Nakajima-Shibata R; Kawahara S; Chtsuka E

Corporate Source: Natl Inst AIST, Inst Biol Resources & Funct, Toyohira Ku, 2-17-2-1 Tsuki samu Hi gashi / Sapporo/ Hokkai do 0628517/ Japan/ (REPRINT) ; Natl Inst AlST, Inst Biol Resources & Funct, Toyohira
Ku, Sapporo/Hokkai do 0628517/Japan/; Natl Inst AlST, Fellow Res Grp,
Toyohira Ku, Sapporo/Hokkai do 0628517/Japan/; Natl Inst AlST, Cent 4,
Gene Funct Res Lab, Tsukuba/Ibaraki 3058562/Japan/
Journal: NUCLEIC ACIDS RESEARCH, 2003, V31, N24 (DEC 15), P7175-7188

ISSN: 0305-1048 Publication Date: 20031215
Publisher: OXFORD UNIV PRESS, GREAT CLARENDON ST, OXFORD OX2 6DP, ENGLAND Language: English Document Type: ARTICLE (ABSTRACT AVAILABLE)

Title: A new, but old, nucleoside analog: the first synthesis of 1-deaza-2 -deoxyguanosine and its properties as a nucleoside and as ol i godeoxynucl eot i des

Abstract: 2'-deoxy-bet a-D-ribofuranosyl)im dazo[4,5-b]pyridin-7-one (1-deaza-2 deoxyguanosine) is described. The compound was converted from the known ALCA-deoxyriboside. The tautomeric structure of . . .

...form Although the analog was found to be labile to acidic conditions, 1-deaza-2'-deoxyguanosine was successfully converted into a phosphoram dite derivative, which was incorporated into oligodeoxynucleotides by the standard phosphoram dite method. Thermal stabilities of oligodeoxynucleotides containing 1-deaza-2'-deoxyguanosine were investigated by thermal denaturing experiments. Also, a triphosphate analog of 1-deaza-2'-deoxyguanosine was synthesized for polymerase extension reactions. Single nucleotide insertion reactions using a template containing 1-deaza-2'-deoxyguanosine, as well as 1-deaza-2'-deoxyguanosine triphosphate, were performed using the Klenow fragment (exonuclease minus) polymerase and other polymerases. No hydrogen bonded base pairs, even a 1-deaza-2'-deoxyguanosine cytidine base pair, were indicated by thermal denaturing studies. However, though less selective and less effective than the natural guanosine counterpart, the polymerase extension reactions suggested the formation of a base pair of 1-deaza-2'-deoxyguanosine with cytidine during the insertion reactions.

...Identifiers: DNA-POLYMERASE-BETA; KLENOW FRAGMENT; HYDROGEN-BONDS; MINOR-GROOVE; STABILITY; O-6-METHYLGUANINE; 1-DEAZAGUANOSINE; NUCLEOTIDES; BINDING; OLIGONUCLEOTIDES

13/3, K/9 (Item 2 from file: 34)
DIALOG(R) File 34: Sci Search(R) Cited Ref Sci
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08094615 Genuine Article#: 246MQ No. References: 50
Title: Is O-1(2) alone sufficient for DNA cleavage? Possible involvement of paramagnetic intermediates
Author: Chanon M (REPRINT); Julliard M; Mehta G; Maiya BG
Corporate Source: FAC SCI & TECH ST JEROWE, LAB AMB, CASE 561/F-13397 MARSEILLE 20//FRANCE/ (REPRINT); INDIAN INST SCI, DEPT ORGAN CHEM/BANGALORE 560012/KARNATAKA/INDIA/; UNIV HYDERABAD, SCH CHEM/HYDERABAD 500046/ANDHRA PRADESH/INDIA/
Journal: RESEARCH ON CHEM CAL INTERMEDIATES, 1999, V25, N7, P633-644 ISSN: 0922-6168 Publication Date: 19990000
Publisher: VSP BV, PO BOX 346, 3700 AH ZEIST, NETHERLANDS Language: English Document Type: REVIEW (ABSTRACT AVAILABLE)

Title: Is O-1(2) alone sufficient for DNA cleavage? Possible involvement of paramagnetic intermediates

Abstract: It is proposed that singlet dioxygen reacting with guanosine or deoxyguanosine part of nucleotides does not, by itself, cause DNA cleavage. The strand break originates at the endoperoxide stage whenever this link evolves into a...

...spatial position to abstract an hydrogen intramplecularly from the ribose or desoxyribose part of the nucleotide. The carbon centered radical thus formed on the sugar part may lead to strand break

...Identifiers: SINGLET OXYGEN; METHYLENE-BLUE; II MECHANISMS; STRAND BREAKS; NUCLEIC-ACIDS; PLUS LIGHT; OXIDATION; DAMAGE; GUANINE; BASE

13/3, K/10 (Item 3 from file: 34)
DIALOG(R) File 34: Sci Search(R) Cited Ref Sci
(c) 2009 The Thomson Corp. All rts. reserv.

06991103 Genuine Article#: 112NK No. References: 76
Title: Prolonged depletion of guanosine triphosphate induces death of insulin-secreting cells by apoptosis

Author: Li GD (REPRINT); Segu VBG; Rabaglia ME; Luo RH; Kowluru A; Metz SA Corporate Source: NATL UNIV SINGAPORE, NATL UNIV MED INST, MD 11 02-01, 10 KENT RIDGE CRESCENT/SINGAPORE 119260//SINGAPORE/ (REPRINT); WILLIAM S MIDDLETON MEM VET ADM MED CTR, ENDOCRINOL SECT, MED SERV/MADISON/WI/53705; UNIV WISCONSIN, SCH MED, DEPT MED, DIV ENDOCRI NOL/MADI SON//WI/53792

Journal: ENDOCRI NOLOGY, 1998, V139, N9 (SEP), P3752-3762 ISSN: 0013-7227 Publication Date: 19980900

Publisher: ENDOCRINE SCC, 4350 EAST WEST HIGHWAY SUITE 500, BETHESDA, MD 20814-4110

Document Type: ARTICLE (ABSTRACT AVAILABLE) Language: English

Title: Prolonged depletion of guanosine triphosphate induces death of

- insulin-secreting cells by apoptosis ... Abstract: Both MPA and mizoribine inhibited mitogenesis, as reflected by [H-3]thymidine incorporation. Cell number, DNA and protein contents, and cell (metabolic) viability were decreased by about 30% 60% and 80.
- ...prolonged MPA treatment. MPA-treated HIT cells displayed a strong and localized staining with a DNA-binding dye (propidium iodide), suggesting condensation and fragmentation of DNA, which were confirmed by detection of DNA laddering in multiples of about 180 bp. DNA fragmentation was observed after 24-h MPA treatment and was dose dependent (29%, 49%, and...
- ...and loss of microvilli, MPA-induced cell death was almost totally prevented by supplementation with guanosine, but not with adenosine or deoxyguanosine, indicating a specific effect of GTP depletion. An inhibitor of protein isoprenylation (lovastatin, 10-100 mu M for 2-3 days) induced cell death and DNA degradation similar to those induced by sustained GTP depletion, suggesting a mediatory role of posttranslationally...
- ...death compatible with apoptosis; this probably involves a direct impairment of GTP-dependent RNA-primed DNA synthesis, but also appears to be modulated by small GTP-binding proteins. Treatment of intact.
- ...Identifiers: GTP-BINDING PROTEINS; CEREBELLAR GRANULE NEURONS; HUMAN PANCREATIC-ISLETS; INTACT RAT ISLETS; BETA-CELLS; DNA-SYNTHESIS; MACROMOLECULAR-SYNTHESIS; MYCOPHENOLATE MOFETIL; NUCLEOTIDE PRECURSORS; CARBOXYL METHYLATION

(Item 4 from file: 34) 13/3. K/11 DIALOG(R) File 34: Sci Search(R) Cited Ref Sci (c) 2009 The Thomson Corp. All rts. reserv.

05164320 Genuine Article#: VE373 No. References: 54
Title: ONE-ELECTRON OXIDATION REACTIONS OF SOME PURINE AND PYRIMIDINE-BASES
IN AQUEOUS-SOLUTIONS - ELECTROCHEM CAL AND PULSE-RADIOLYSIS STUDIES Author: FARAGGI M, BROITMAN F; TRENT JB; KLAPPER MH Corporate Source: NUCL RES CTR NEGEV, DEPT CHEM, POB 9001/IL-84190 BEER

SHEVA/ISRAEL/; OHIO STATE UNIV, DEPT CHEM, BIOL CHEM DI V/ COLUMBUS/ / OH/ 43210

Journal: JOURNAL OF PHYSICAL CHEMISTRY, 1996, V100, N35 (AUG 29), P 14751-14761 ISSN: 0022-3654

Document Type: ARTICLE Language: ENGLISH (Abstract Available)

Abstract: The reduction potentials of some purine and pyrimidine bases and the guanine nucleoside and nucleotide at pH values between 7 and 13 were investigated using the techniques of cyclic voltammetry...

- ...volts vs NHE, at pH 7 are those of xanthine, 0.88 V, and 1methylguanine, 1.06 V (NHE). The extrapolated value of guanine is ca. 1.0 V. We...
- ...a radical-radical mechanism with a second-order rate constant. However, the guanine nucleosides and nucleotide radicals have shown at all pHs two consecutive processes (first order followed by a second...
- ... of a new transient was observed at pH greater than or equal to 9 for guanosine, pH greater than or equal to 11 for 2'-deoxyguanosine, and at pH 13 for 5'-GMP. The observed new transient spectra were similar to...
- ...for the oxidized guanine radical. Therefore, we suggest that in these oxidized guanine nucleosides and nucleotide the oxidized guanine radical has been released. As previously suggested our results imply that the...
- ...83, 1-11) we suggest a proton assisted mechanism for a double-strand break in DNA.
- ...Identifiers: REDOX POTENTIALS; FREE-RADICALS; REDUCTION POTENTIALS; RATE CONSTANTS; DNA; NUCLEOSIDES; CHEMISTRY; TRYPTOPHAN; CYTOSINE; TYROSINE
- 13/3, K/12 (Item 5 from file: 34)
 DIALOG(R) File 34: Sci Search(R) Cited Ref Sci
 (c) 2009 The Thomson Corp. All rts. reserv.
- 04362220 Genuine Article#: RZ240 No. References: 81
 Title: X-RAY CRYSTAL-STRUCTURE ANALYSIS OF THE CATALYTIC DOWALN OF THE ONCOGENE PRODUCT P21(H-RAS) COMPLEXED WITH CAGED GTP AND MANT DOPPNHP Author: SCHELDIG AJ; FRANKEN SM; CORRIE JET; RELD GP; WITTINGHOFER A; PALEF; GOODY RS
- Corporate Source: MAX PLANCK INST MOLEK PHYSIOL, RHEINLANDDAMM 201/ D-44026 DORTMUND//GERMANY/; MAX PLANCK INST MOLEK PHYSIOL/ D-44026 DORTMUND//GERMANY/; MAX PLANCK INST MED RES, BIOPHYS ABT/ D-69028 HEIDELBERG//GERMANY/; NATL INST MED RES/LONDON NW/ 1AA//ENGLAND/; UNIV TORONTO, DEPT BIOCHEM & MOLEC & MED GENET/TORONTO/ON M6S 1A8/CANADA/Journal: JOURNAL OF MOLECULAR BIOLOGY, 1995, V253, N1 (OCT 13), P132-150 ISSN: 0022-2836
- Language: ENGLISH Document Type: ARTICLE (Abstract Available)
- ... Abstract: H-ras) (residues 1 to 166) and the nucleotides P-3-1-(2-nitrophenyl) ethyl guanosine triphosphate (''caged GTP''; pure R- and S-diastereomers) and 3'-O-(N-methylanthraniloyl)-2'-deoxyguanosine 5'-(beta, gamma-imido)-triphosphate (''mantdGppNHp''), have been refined to an R-factor of...
- ... of loop L2 (residues Glu31 to Thr35) where the additional aromatic group attached to the nucleotide comes very close to the side-chain of Tyr32, including backbone displacements of 2.6...
- ...and mant dQppNHp, respectively. The refined structures provide additional data for the design of new nucleotide analogs and the importance of their stereochem stry as well as for the design of new...
- importance of their stereochemistry as well as for the design of new...

 ...Identifiers: NUCLEOTIDE EXCHANGE; SACCHAROMYCES-CEREVISIAE;

 3-DIMENSIONAL STRUCTURES; DIFFRACTION DATA; TRIPHOSPHATE CONFORMATION;
 MOLECII AR MECHANISM: ALPHA-CHYMOTRYPSIN: ACTIVATING
- MOLECULAR MECHANISM; ALPHA-CHYMOTRYPSIN; ACTIVATING
 ... Research Fronts: NMR RESONANCE ASSIGNMENTS; SECONDARY STRUCTURE
 ELEMENTS; BOVINE PANCREATIC TRYPSIN-INHIBITOR; GLOBAL FOLD OF OXIDIZED
 MERP; DNA-BINDING DOWAIN)
 - 93-3088 001 (RAT MUSCLE; PROTEIN PHOSPHATASE-1; MAJOR GLUTATHIONE Page 20

TRANSFERASE)

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13/3, K/13
                 (Item 1 from file: 72)
72: EMBASE
DIALOG(R) File
(c) 2009 Elsevier B.V. All rts. reserv.
                 EMBASE No: 2007496932
0082062390
  Stereospecific synthesis and characterization of
oligodeoxyribonucleotides containing an N SUP 2-(1-carboxyethyl)-2prime-
deoxyguanosi ne
  Cao H.; Jiang Y.; Wang Y.
Department of Chemistry, University of California, Riverside, CA
  92521-0403.
                United States
  AUTHOR EMAÍL: yinsheng.wang@ucr.edu
CORRESP. AUTHOR/ AFFIL: Wang Y.: Department of Chemistry, University of California, Riverside, CA 92521-0403, United States
  CORRESP. AUTHOR EMAIL: yinsheng.wang@ucr.edu
  Journal of the American Chemical Society ( J. Am. Chem. Soc. ) (United
            Oct ober 10, 2007, 129/40 (12123-12130)
ACSA ISSN: 0002-7863
  CODEN: JACSA
  DOI: 10.1021/j a072130e
  DOCUMENT TYPE: Journal; Article RECORD TYPE: Abstract LANGUAGE: English SUMMARY LANGUAGE: English
  NUMBER OF REFERENCES: 45
  Stereospecific synthesis and characterization of
oligodeoxyribonucleotides containing an N SUP 2-(1-carboxyethyl)-2prime-
deoxyguanosi ne
  Methylglyoxal is a highly reactive alpha-ketoaldehyde that is
produced endogenously and present in the environment and foods. It can
modify DNA and proteins to form advanced glycation end products
(AGEs). Emerging evidence has shown that N SUP 2-(1-carboxyethyl)-2prime-
deoxyguanosine (N SUP 2-CEdG) is a major marker for ACE-linked DNA adducts. Here, we report, for the first time, the preparation of
oligodeoxyribonucleotides (ODNs) containing individual...
...block considerably the replication synthesis mediated by the
exonuclease-free Klenow fragment of Escherichia coli DNA polymerase
1. Strikingly, the polymerase incorporated incorrect nucleotides, dGMP and
dAMP, opposite the lesion more preferentially than the correct
nucleotide, dCMP. (c) 2007 American Chemical Society.
DRUG DESCRIPTORS:
*deoxyguanosine derivative; *oligodeoxyribonucleotide
adenosi ne phosphate; advanced glycati on end product; al dehyde deri vati ve; cyti di ne phosphate; DNA polymerase; exonucl ease; guanosi ne
phosphate; ketone derivativé; methylglyoxal
MEDICAL DESCRIPTORS:
article; diastereoisomer; DNA adduct; DNA modification;
Escherichia coli; melting point; molecular stability; oligomerization;
protein modification; reaction analysis; synthesis; thermodynamics
DRUG TERMS (UNCONTROLLED): n 2 (1 carboxyethyl) 2' deoxyguanosine ... CAS REGISTRY NO.: 8063-98-7 (adenosine phosphate); 63-37-6 (cytidine
    phosphate); 37217-33-7 (DNA polymerase); 37228-74-3 (exonucl ease)
     ; 29593-02-0...
... 85-32-5 (guanosi ne phosphat e); 78-98-8 (met hyl gl yoxal)
 13/3, K/14
                 (Item 2 from file: 72)
```

10553948deoxyguanosi ne. t xt DIALOG(R) File 72: EMBASE (c) 2009 Elsevier B.V. All rts. reserv. EMBASE No: 2003445075 0079735258 8-Methylguanosine: A Powerful Z-DNA Stabilizer Xu Y.; Ikeda R.; Sugiyama H. Inst. of Biomat. and Bioengineering, Tokyo Medical and Dental University, Chi yoda, Tokyo 101-0062, Japan AUTHOR EMAIL: hs@xuchem kyoto-u.ac.jp CORRESP. AUTHOR/AFFIL: Sugiyama H.: Inst. of Biomat. and Bioengineering, Tokyo Medical and Dental University, Chiyoda, Tokyo 101-0062, Japan CORRESP. AUTHOR EMAIL: hs@kuchem kyoto-u.ac.jp Journal of the American Chemical Society (J. Am. Chem. Soc.) (United States) November 5, 2003, 125/44 (13519–13524) CODEN: JACSA | ISSN: 0002-7863 DOI: 10.1021/ja036233i DOCUMENT TYPE: Journal; Article RECORD TYPE: Abstract LANGUAGE: English SUMMARY LANGUAGE: English NUMBER OF REFERENCES: 33 8-Methylguanosine: A Powerful Z-DNA Stabilizer Z-form DNA. It was found that the incorporation of 8methyl guanosine (m SUP 8rG) in oligonucleotides stabilizes the Z form more dramatically than does the incorporation of 8-methyl-2primedeoxyguanosine (m SUP 8G). This enhancement is ascribed to a reduction in the entropic penalty, which... ...introduction of hydrophilic groups in solvent-exposed regions. The incorporation of m SUP 8rG into DNA sequences markedly stabilizes the Z form even in the absence of NaCl. The Z-DNA stabilizer allows oligonucleotides with a wide range of sequences to be converted to the Z... DRUG DESCRIPTORS: *DNA; *guanosine_derivative MEDI CAL DESCRI PTORS: *DNA conformation article; chemical reaction; entropy; hydrophilicity; nucleotide sequence; synthesis DRUG TERMS (UNCONTROLLED): 8 met hyl 2' deoxyguanosine; 8 met hyl guanosi ne CAS REGISTRY NO.: 9007-49-2 (DNA); 7647-14-5 (sodium chloride) (Item 3 from file: 72) 72: EMBASE 13/3, K/15 DIALOG(R) File (c) 2009 Elsevier B.V. All rts. reserv. 0077071763 EMBASE No: 1997365032 DNA helicase activity of the hepatitis C virus nonstructural Gwack Y.; Kim D.W; Han J.H.; Choe J. Department of Biological Sciences, Korea Adv. Inst. Sci. and Technol., Taejon, Korea, Republic of CORRESP. AUTHOR/AFFIL: Choe J.: Department of Biological Sciences, Korea Advanced Inst. Sci./Technology, Taejon 305-701, Korea, Republic of European Journal of Biochemistry (EUR. J. BIOCHEM) (Germany) December 9, 1997, 250/1 (47-54)

RECORD TYPE: Abstract

Page 22

CODEN: EJBCA

ISSN: 0014-2956

DOCUMENT TYPE: Journal; Article

LANGUAGE: English SUMMARY LANGUAGE: English

NUMBER OF REFERENCES: 37

DNA helicase activity of the hepatitis C virus nonstructural protein 3

...HCV) nonstructural protein 3 (NS3) is a known RNA helicase. an enzyme that unwinds RNA DNA and RNA RNA duplexes. We have now deciphered the biochemical characteristics of the HCV NS3 DNA helicase activity. Recombinant NS3 was expressed in Escherichia coli, purified to near hemogeneity, and tested for DNA helicase activity. The optimal conditions for DNA unwinding (for example, the preferred pH and magnesium ion concentration) were similar to those for RNA unwinding The DNA helicase activity was very sensitive to potassium ion concentration, while DNA binding and DNA-stimulated ATPase activities were not. The direction of DNA unwinding was determined to be 3' to 5'. All four ribonucleoside triphosphates (ATP, GTP, CTP...

...serve as energy sources, but GTP and dGTP were less efficient than the others. When nucleotide analog inhibitors were added to the DNA helicase reaction, the overall order of inhibitory capacity was: adenosine 5'-O-(3-thiotriphosphate) > adenylyl-imidodiphosphate and adenyl-(beta, gamma-methylene)-diphosphate > AMP. DNA helicase activity was inhibited strongly by ssDNA and ssRNA, but was little affected by dsDNA...

...not by dsDNA. The NS3 protein could unwind up to 500 base pairs of duplex DNA. The possible multifunctional nature of the NS3 protein is discussed and compared with that of...

DRUG DESCRI PTORS:

adenosi ne 5' o (3 thi otri phosphate); adenosi ne phosphate; adenosi ne tri phosphatase; adenosi ne tri phosphate; adenyl yl i mi dodi phosphate; bet a, gamma met hyl eneadenosi ne tri phosphate; cyti di ne tri phosphate; deoxyadenosi ne tri phosphate; deoxycyti di ne tri phosphate; deoxyguanosi ne tri phosphate; dna; double stranded dna; guanosi ne tri phosphate; magnesi um i on; pot assi um i on; recombi nant enzyme; ri bonucleosi de; rna; si ngle stranded dna; thym di ne tri phosphate; uri di ne tri phosphate; vi rus enzyme; vi rus protei n MEDI CAL DESCRI PTORS: arti cle; control led study; dna bi ndi ng; dna denaturati on;

enzyme activity; enzyme inhibition; enzyme purification; enzyme substrate; escheric Dela activity; nonhuman; ph; priority journal...

... CAS REGISTRY NO: 987-65-5 (adenosine triphosphate); 25612-73-1 (adenyl yli midodi phosphate); 3469-78-1 (beta, gamma met hyl eneadenosine triphosphate); 65-47-4 (cyti dine triphosphate); 1927-31-7 (deoxyadenosine triphosphate); 2056-98-6 (deoxycyti dine triphosphate); 2564-35-4 (deoxyguanosine triphosphate); 9007-49-2 (DNA); 86-01-1 (guanosine triphosphate); 42613-29-6 (helicase); 22537-22-0 (magnesiumion); 24203-36-9 (potassiumion...